N920
User Guide

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Notebook Computer User Guide

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FCC Information to User

Safety and Care Instructions

No matter what your level of experience with computers, please make sure you read the safety and care instructions. This information can help protect you and your computer from possible harm.

Radio and television interference

Warning: Use the specified shielded power cord and shielded signal cables with this computer, so as not to interfere with radio and television reception. If you use other cables, it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encourage to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the device and receiver
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

You may find helpful the following booklet, prepared by the Federal Communications Commission: Interference Handbook (stock number 004-000-00345-4). This booklet is available from the U.S. Government Printing Office, Washington, DC20402

Warning: The user must not modify or change this computer without approval. Modification could void authority to this equipment.

FCC RF Exposure

FCC RF Radiation Exposure Statement:

This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

15.247 (b)(4), the EUT meets the requirement that it be operated in a manner that ensures the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines (1.1307, 1.1310, 2.1091 and 2.1093)

Canadian Department of Communications Compliance Statement

This Class B digital apparatus meets all requirement of the Canadian Interference-Causing Equipment Regulations.

Shielded Cables Notice

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Peripheral Devices Notice

Only peripherals (input/output devices, terminals, printers, etc) certified to comply with Class B limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Optical Disk Drive Notice

The optical disk drive is Class 1 Laser Product.

Caution

Changes or modifications not expressly approved by the manufacturer may void the user's authority, which is granted by the Federal Communications Commission, to operate this computer.

Use Conditions

This part complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

European Notice

For the following equipment: Notebook PC

Is herewith confirmed to comply with the requirements set out in the

Council Directive on the Approximation of the Laws of the Member

States relating to Electromagnetic Compatibility (89/336/EEC), Lowvoltage

Directive (73/23/EEC) and the Amendment Directive

(93/68/EEC), the procedures given in European Council Directive 99/5/EC and 89/3360EEC.

The equipment was passed. The test was performed according to the following European standards:

EN 300 328-2 V.1.2.1 (2001-12)

EN 301 489-1 V.1.3.1 (2001-09) / EN 301 489-17 V.1.1.1 (2000-09)

EN 50371: 2002

EN 55022: 2001

EN 55024: 2001

EN 60950: 2000

EN 61000-3-2: 2000

EN 61000-3-3: 1995 + A1: 2001

802.11b Restrictions:

- European standards dictate maximum radiated transmit power of 100mW EIRP and frequency range 2.400-2.4835GHz;

- In France, the equipment must be restricted to the 2.4465-2.4835GHz frequency range and must be restricted to indoor use."

For DVD Players with both 525p and 625p progressive scan outputs:

'CONSUMERS SHOULD NOTE THAT NOT ALL HIGH DEFINITION TELEVISION SETS ARE FULLY COMPATIBLE WITH THIS PRODUCT AND MAY CAUSE ARTIFACTS TO BE DISPLAYED IN THE PICTURE. IN CASE OF 525 OR 625 PROGRESSIVE SCAN

PICTURE PROBLEMS, IT IS RECOMMENDED THAT THE USER SWITCH THE CONNECTION TO THE 'STANDARD DEFINITION' OUTPUT. IF THERE ARE QUESTIONS REGARDING OUR TV SET COMPATIBILITY WITH THIS MODEL 525p AND 625p DVD PLAYER, PLEASE CONTACT OUR CUSTOMER SERVICE CENTER.'

"This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited."

"U.S. Patent Nos. 4,631,603; 4,819,098; 4,907,093; 5,315,448; and 6,516,132."

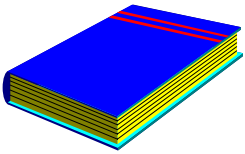
About Your Notebook Computer

Congratulation for having purchased your new Professional Multimedia Notebook. This notebook incorporates the strongest features, which integrate the latest technologies available in the notebook industry.

Your new notebook computer not only drives today multimedia applications but also be ready for tomorrow exciting new software.

This Professional Multimedia Notebook is a freedom, flexibility, and functionality notebook which users are demanding for a long time.

About Your User Guide



Welcome to your Professional Multimedia Notebook User Guide. This manual covers everything you need to know in learning how to use your computer. This manual also assumes that you know the basic concepts of Windows and the PC. You will start doing a lot of great and fun things with your computer.

This manual is divided into eight chapters.

Chapter 1	gives introduction on your computer features.
Chapter 2	provides step-by-step instructions to help you begin using your notebook as quickly as possible.
Chapter 3	describes how to operate the standard features of your computer.
Chapter 4	illustrates how to integrate video and sound chips into impressive presentation.
Chapter 5	illustrates how to connect external device to your computer.
Chapter 6	explains how to use the System BIOS Setup program.
Chapter 7	explains how to use the internal module options of your computer.
Chapter 8	offers instructions on how to care and maintain your notebook.

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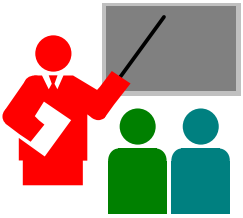
1 Introduction



Your Notebook PC is a fully Windows compatible portable personal computer. With the latest features in mobile computing and multimedia technology, this notebook makes a natural traveling companion. With leap of technology and compact, your Notebook PC runs on a whole wide range of general business, personal productivity, entertainment, and professional applications. It is ideal for use in the office, at home, and on the road.

Your Notebook PC makes an ideal choice for use in the office, the schoolroom, at home, on the road and all other occasions.

1.1 Feature Highlight

Before we go to identify each part of your Notebook PC, we will first introduce you to other notable features of your computer.

Processing Unit

- Your notebook runs on Intel® Celeron® M Dothan microprocessor that is integrated with 1MB L2 Cache. Check with your dealer on the CPU type and speed.
- Fully compatible with an entire library of PC software based on operating systems such as Windows XP.

Memory

This notebook provides two memory slots for installing DDR SDRAM 200-pin SODIMM modules up to 2GB using 256MB, 512MB or 1024MB DDR SDRAM modules.

Wide Screen LCD Display

Provides extraordinary 15.4"1280 x 800 (16:10) wide screen LCD display. It is the best choice for you to watch DVD movie.

Wireless LAN

IEEE 802.11b/g, Mini PCI Module (BTO)

DVD Dual

The DVD Dual device pack combines two standard packs: DVD-RW combo and DVD+RW combo.

USB 2.0

Provides four USB2.0 ports for fastest I/O data transmission.

Graphic System

Provides blazing graphics controller embedded in ATI RC410MB chipset

PCI Local Bus Architecture

- 32-bit PCI Enhanced IDE optimizes the data transfer between the CPU and PATA hard disk drives. Support ultra DMA ATA-133 PIO Mode up to PIO Mode 4, bus mastering for LBA Scheme.

Audio System

Full-duplex 16-bit stereo audio system output. Sound Blaster compatible.

Flash BIOS

Flash BIOS allows you to easily upgrade the System BIOS using the Phoenix Flash utility program.

Power and System Management

- Integrated SMM (System Management Mode) on system chipset that shuts down components not in use to reduce power consumption. To execute power management, you can set up the parameter in Power Options properties by pointing your mouse to Control Panel of Windows.
- Closing the Notebook computer (lowering the cover) allows you to suspend the system operation instantly and resume at the press of the power button.
- System Password for User and Supervisor included on the BIOS SETUP Program to protect unauthorized use of your computer.

1.2 Unpacking the Computer

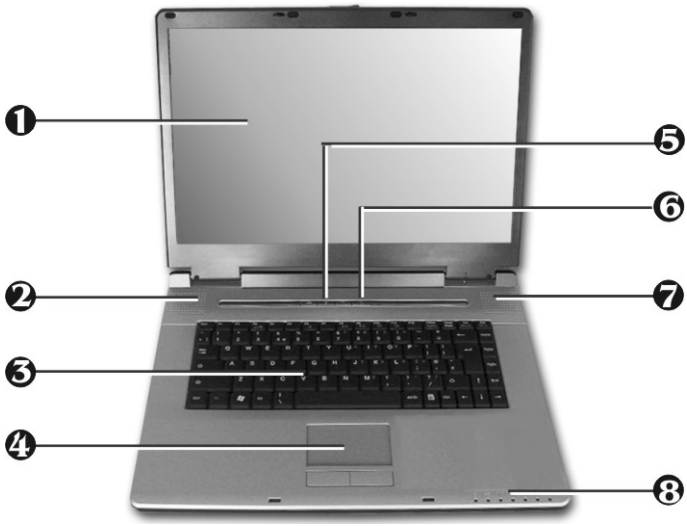
Your computer comes securely packaged in a sturdy cardboard shipping carton. Upon receiving your computer, open the carton and carefully remove the contents. In addition to this User Guide, the shipping carton should also contain the following items:

- ☑ The Notebook Computer
- ☑ An AC Adapter and AC Power Cord
- ☑ Li-Ion Battery Pack
- ☑ CD with Driver Utility and Electronic-book
- ☑ Quick Setup Manual

Carefully inspect each component to make sure that nothing is missing and/or damaged. If any of these items is missing or damaged, notify your dealer immediately. Be sure to save the shipping materials and the carton in case you need to ship the computer or if you plan to store the computer away sometime in the future.

1.3 The Inside of the Notebook

The notebook computer is compact with features on every side. First, look at the inside of the system. The following sections describe inside features.



1. Color Widescreen LCD Display
2.7. Built-in Stereo Speaker
3. Keyboard
4. Touchpad Pointing Device
5. Easy Buttons
6. Power On/Resume Button
8. LED Indicators

- Color Widescreen LCD Display

  The notebook computer comes with a color LCD that you can adjust for a comfortable viewing position. The LCD is 15.4" TFT color LVDS with 1280x800 (Wide XGA with ratio 16:10) resolution panels. The features of the Color LCD Display are summarized as follows:

  ⇓ TFT color LVDS with Widescreen 15.4" 1280x800 (Wide XGA) resolution panels.

  ⇓ Capable of displaying 16M colors (32-bit true color) on either size panels.

- ⇓ LCD display control hot-keys allows you to adjust the brightness of the LCD.
- ⇓ Simultaneous display capability for LCD and external desktop computer monitor.

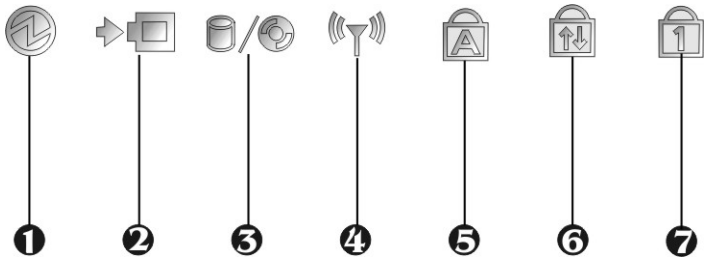
- Built-in Stereo Speakers
  Integrated left and right mini stereo speakers for sound and audio output for your multimedia presentations or listening pleasure.
- Keyboard
  - ⇓ Standard QWERTY-key layout and full-sized 87 keys keyboard with Windows system hot-keys, embedded numeric keypad, 6 hot keys, inverted "T" cursor arrow keys, and separate page screen control keys.
  - ⇓ Wide extra space below the keyboard panel for your wrist or palm to sit-on comfortably during typing.
- Touchpad Pointing Device
  Microsoft mouse compatible with two Touchpad click buttons. The two select buttons located at each side support tapping selection and dragging functions. These buttons work like a standard computer mouse. Simply move your fingertip over the Glide Pad to control the position of the cursor. Use the selection buttons below the Glide Pad to select menu items.
- Easy Buttons
  There are three easy buttons used for CPU throttling, accessing Internet and Wireless LAN functions instantly and easily. Description of the easy buttons appears in the latter part of this section.

- Power On/Resume Button
  Switches the computer power on and off, or resumes whenever it is in Suspend mode.

- LED Indicators
  Keeps you informed of your notebook computer's current power status and operating status. Description of the status icons appears in the latter part of this section.

NOTEBOOK STATUS ICONS

The Status LED Panel keeps you informed of the notebook's current power and operating status. Each LED is marked with an icon to designate the system status.



1. Power Indicator
2. Battery Charging LED
3. Drive Access
4. Wireless LAN Access
5. Caps Lock
6. Scroll Lock
7. Num Lock

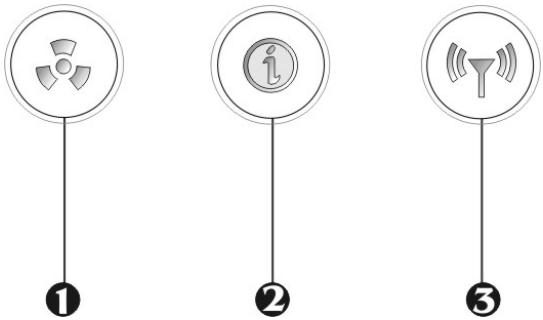
- Power Indicator
  Lets you know that power to the system is turned on. This LED is positioned so that you can see the power state whether the LCD panel is opened or closed.

- ⇓ Lights green when the system is powered on.
- ⇓ Lights green blinking when the system is in Standby mode.
- ⇓ Lights yellow when the battery power is low.
- ⇓ Lights orange when the battery power is critical low.

- Battery Charging LED
  Lights to indicate battery in charging status.
  - ⇓ Lights orange to indicate that the battery is in charging.
  - ⇓ Lights orange blinking when the battery charging is in error.
  - ⇓ Lights green to indicate the battery is fully charged or no battery installed.
- Drive Access
  When LED in blue blinking light indicates that the system is accessing the Hard Disk or Optical Disk Drive.
- Wireless LAN access
  When LED in blue light indicates that the wireless LAN module is activated. When LED lights off, it indicates that the function is disabled.
- Caps Lock
  When LED in blue light indicates that the Caps Lock key on the keyboard is activated. When activated, all alphabet keys typed in will be in uppercase or capital letters.
- Scroll Lock
  When LED in blue indicates that the Scroll Lock key on the keyboard is activated. The Scroll Lock key has different functions depending on the software you are using.

- Num Lock
  When LED in blue light indicates that the Num Lock key on the keyboard is activated. When activated, the embedded numeric keypad will be enabled.

THE FUNCTION OF EASY BUTTONS



1. CPU Throttling 2. Internet Button 3. Wireless LAN Button

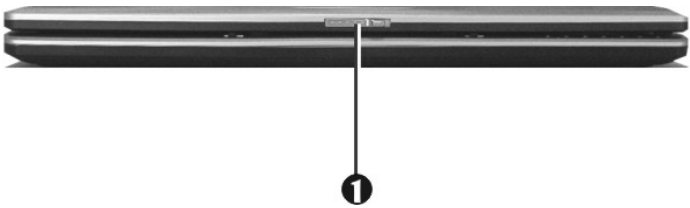
- CPU Throttling

  Press this button to decrease the CPU performance speed in order to save power for extending battery life and operation time.

- Internet Button
  This technology is designed specifically for providing a very convenient way in connecting Internet only by pressing Internet button as shown in the graphics. Just Press this button to open the Internet Explorer directly.

- Wireless LAN Button
  Push this button to activate or inactivate the Wireless LAN. When you activate the wireless LAN function, it will search the wireless LAN signal automatically if you had installed the driver.

1.4 The Front Side of the Notebook



1. Cover Switch

- Cover Switch
  The cover (LCD panel) is locked when it is closed. Slide the button right aside to release the latch for opening the cover of the computer.

1.5 The Rear Side of the Notebook

The system ports at the back of your notebook computer can connect various devices. Each port is described as followings.

1. USB 2.0 Ports 2. VGA Port 3.Kensington Lock Hole

- USB 2.0 Ports
  The Universal Serial Bus (USB) port allows you to connect USB 2.0-compliant devices (for example, printers, scanners and so on) to your notebook computer.
- VGA Port
  Lets you attach an external monitor or projector for wider display. You can run the LCD display and the external monitor simultaneously or switch it to monitor only using the display hot-key.
- Locking Device Keyhole
  Lets you attach a Kensington security system or a compatible lock to physically secure your notebook computer.

1.6 The Left Side of the Notebook

The left side of your notebook computer provides the features shown in the following figure.

1. DC Power Port
2. Modem Port
3. Optical Disk Drive
4. USB 2.0 Ports
5. Headphone Jack
6. Microphone Jack

- DC Power Port
  Lets you connect the AC power adapter in supplying continuous power to your notebook and recharging the battery.
- Modem Port
  A 56K internal fax/data modem is installed. It keeps you connected to the outside world through phone line.

+ For electrical safety concerns, only use telephone cables rated 26AWG or higher.

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. ***Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.***
2. ***Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.***
3. ***Do not use the telephone to report a gas leak in the vicinity of the leak.***
4. ***Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.***

- Optical Disk Drive
  Allows you to load and start programs from a compact disc (CD) or a digital video disc (DVD) and play conventional audio CDs. It also can make CD/DVD by using CD-R/RW or DVD-R/RW.
- USB 2.0 Ports
  The Universal Serial Bus (USB) port allows you to connect USB 2.0-compliant devices (for example, printers, scanners and so on) to your notebook computer.
- Headphone Jack (with SPDIF out)
  Lets you plug in a stereo headphone, powered speakers, or earphone set with 1/8 inch phono plug for personal listening. (The SPDIF transmits digitized audio signal by optical fiber. The external audio amplifier can get the best audio quality without loss.)
- Microphone Jack
  Allows you to connect an external microphone for monophonic sound recording directly into your notebook computer.

1.7 The Right Side of the Notebook

The right side of the notebook computer offers the features shown in the following figure.

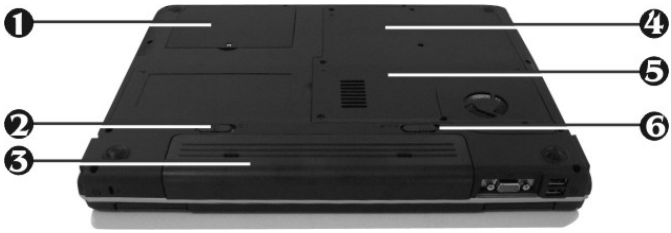
4. Air-Outlet Vent 5. TV Port 6. LAN Port

Right Side Features

- Air-Outlet Vent
  Emits the heat out of your computer and keeps it within operating temperature.
- TV Port
  Lets you connect to the S-Video TV connector for presentation or VCD, DVD watching.
- LAN Port
  An internal 10Base-T/100Base-TX Ethernet LAN module connects your computer to other computers/networks through a local area network (LAN).

1.8 The Underside of the Notebook

The bottom of the notebook computer offers the following features.



1. Hard Disk Compartment
2. Battery Lock Latch
3. Battery Bay
4. Wireless LAN Compartment
5. Memory Compartment
6. Battery Release Latch

Bottom of the System

- Hard Disk Compartment
  Open this cover of this compartment to replace with other Hard Disk Drive. Please refer to Chapter 7 for how to replace it.
- Battery Lock Latch
  Push the latch to the right side to lock and secure the battery. This action is available to release the battery when the battery lock latch has located to unlock status at the left side.
- Battery Bay
  Equipped with a choice of Lithium-Ion (Li-Ion) battery pack.

- Wireless LAN Compartment
  This compartment is for installing Wireless LAN module to enable the Wireless LAN function. We strongly suggest that Wireless LAN module should be installed only by certified dealer.
- Memory Compartment
  There are two SO-DIMM memory slots. One memory slot is empty for upgrade usage.
- Battery Release Latch
  To release the battery, first locate the Battery Lock Latch at the left side in unlock status, then push the Battery Release Latch to the right end to remove the battery pack.

1.9 Notebook Accessories

AC Adapter

The AC Adapter supplies external power to your notebook computer and charges the internal battery pack simultaneously. The AC adapter has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets. You just change the power cord if you are going to use your notebook in other countries with different connector outlets.

When you connect the AC adapter, it charges the battery whether or not the notebook computer is powered on.

Battery Pack

Aside from the AC adapter, your computer can also be powered through the internal battery pack. The battery pack uses rechargeable Lithium-Ion (Li-Ion) battery cells that provide long computing hours when fully charged and power management enabled. You should always leave the battery inside your computer even when using the AC adapter as it also acts as a back-up power supply in case power from the AC adapter is cut off. It is also very important to have the battery pack always charged to prevent battery cell degradation.

1.10 Notebook Options

DVD/CD-RW Combo Device Pack

This device pack can write data to CD-R or CD-RW CD for you to backup the data and also can read DVD/CD title.

DVD dual (Dual Rewritable DVD combo) Device Pack

This device pack combines following two standard packs. Using the suitable media, you can make any format of CD or DVD as you want.

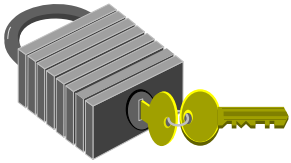
DVD-RW combo:

This device pack can write data to CD-R or CD-RW and DVD-R or DVD-RW media and also can read DVD/CD title. This media is commonly used on DVD video player.

DVD+RW combo:

This device pack can write data to CD-R or CD-RW and DVD+R or DVD+RW media for you to backup the data and also can read DVD/CD title. This media is commonly used on newer DVD video player.

2 Getting Started



Your Notebook is designed and pre-configured for easy setup and use. This chapter describes the installation steps you should follow to get the notebook up and running as quickly as possible. Contact your dealer if they have pre-installed all the needed drivers to fully operate your computer or if there is an update on the driver installation of the notebook.

2.1 Using the Battery Pack

The notebook is designed to operate with one of the following power sources:

- With AC power using the AC adapter connected to an electrical outlet.
- With a Lithium-Ion (Li-Ion) battery pack.

You should use the AC adapter whenever it is possible, relying on the battery pack only when AC power is unavailable.

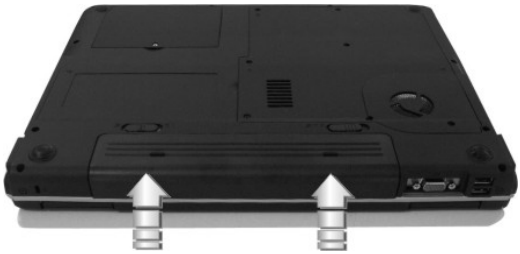
Before you use your notebook computer, install and recharge the battery pack first. The rechargeable Li-Ion battery pack allows you to operate the notebook without an external power source. When you connect the AC power adapter, the battery immediately starts to recharge. For maximum battery performance, fully discharge the battery first before recharging it when you start to use it first time. To do so, unplug the AC adapter, turn off power management features (through Setup and Windows), and turn on the system. Once the battery is fully discharged, plug in the AC adapter and recharge the battery.

If you do not discharge the battery completely, it fails to accept a full recharge.

+ ***Li-Ion battery is vulnerable, do not charge it with other power adapter, or it may cause fire or explosion.***

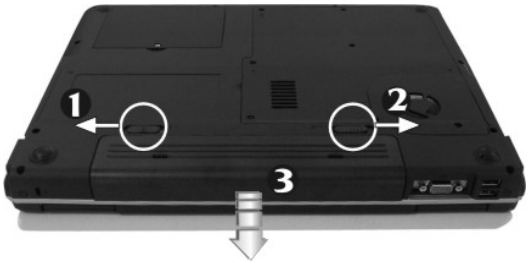
Installing the Battery Pack

This notebook provides the most convenient way to install the battery pack into your computer. With the extended nose directed toward the compartment, insert and push the battery pack.



Removing the Battery Pack

To remove the battery pack, slide the lock latch to the end of left side to unlock the battery lock latch (1), then slide the battery release latch to the end of right side to release the battery latch (2), and take out the battery pack with your finger (3) simultaneously.



Replacing the Battery Pack

When your notebook estimates that the battery only has enough charge to continue for a few minutes, it will alert you with a battery low warning beep. If you are consuming a lot of power by using the audio system, the hard disk drives, and optical disk drive, your notebook might run out of charge much sooner than you expect. You should always respond to the battery low indication by connecting to AC power or turning off your notebook, or suspending your notebook to disk. If you do not do so, the notebook will automatically suspend to disk and turn off. The contents of the memory will store in the hard disk drive. You will be unable to restart the notebook until you have connected to the AC adapter or installed a charged battery. To replace the battery pack, refer to the previous sections on "Installing the Battery Pack" and "Removing the Battery Pack."

+ ***For Window XP, the suspend mode (Hibernate or Standby) can be chosen at Power Options of Windows's Control Panel)***

+ ***Be sure to save your data before replacing the battery pack or connecting the AC adapter. Failure to do so can result in data loss.***

EXTENDING BATTERY LIFE

It is important to be aware of the simple things for extending the life of the system main battery while you are on the road. You should find a working place where the external lighting is not too bright and turn down the screen brightness. Also, you can choose the available mode on the Power Management item of the Control Panel in Windows.

2.2 Connecting the AC Power Source

The AC adapter provides external power source to your computer and charges the internal battery pack at the same time. The AC adapter also has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets.

To connect the power adapter:

1. Plug the AC power cord into the power socket of the AC power adapter.
2. Plug the other end of the AC power cord to a live AC wall outlet.

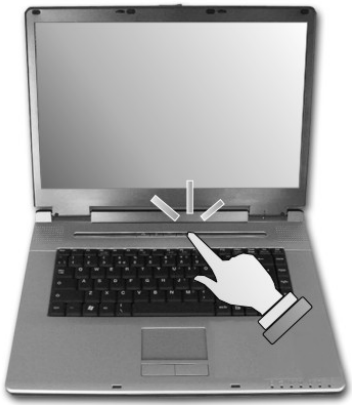
3. Plug the connector of the AC adapter to the DC-IN port found at the left side of the computer.

+ ***Whenever possible, it is advisable to always have the AC adapter connected to the notebook and the battery pack installed. This ensures continuous power supply and prevents any data loss incurring from sudden power breakdown.***

+ • ***For the power supply of this equipment, an approved power cord has to be used.***
  • ***Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.***
  • ***Before cleaning the computer, make sure it is disconnected from any external power supplies (i.e. AC adapter).***

2.3 Starting Your Computer

The Power/Resume button is found on the top of the base unit. Press the Power/Resume button to start your computer and check that if the Power LED turns on.



After a few seconds, the computer's display will turn on and your computer will begin to execute the Power On Self Test or POST to check if all system components are running properly. Any error found during the test will be displayed on the screen and may generate short beep sound as well.

After the test, the screen will also display a message "**press <F2> to enter SETUP**". You don't need to run this program at the moment as your dealer already made the necessary settings for your computer optimal operation. Refer to Chapter 6 on running the SETUP program later.

After the test has completed, your computer will start to search and boot up the operating system from your hard drive. The notebook computer normally comes with a Windows operating system pre-installed in your hard drive. Consult the Windows manual on how to use the program. If not, contact your dealer for assistance.

2.4 Adjusting the Display Controls

The LCD brightness adjustment is controlled by <**Fn**> +<**F8**> and <**Fn**> + <**F9**> keys respectively. You need to press these hot-key controls after powering on your notebook to suit your viewing pleasure.

The Brightness hot-key control adjusts the brightness on the LCD. The brightness hot-key control will not set the LCD completely dark or bright; it provides sufficient lighting to the LCD to match the external lighting of the surrounding. The brighter the room, the more you need to increase the brightness of the LCD.

2.5 Installing the Notebook Device Drivers

If you already have an operating system installed into your notebook computer, it is best to install the needed device drivers for using the built-in devices of your computer. Before installing the drivers, check with your dealer

first if they have already installed all the drivers along with the operating system. If not, follow the procedures below:

INSTALLING WINDOWS XP FROM OPTICAL DISK DRIVE

To install Windows XP directly from your optical disk drive, please go to **Boot** menu of **BIOS** setup menu. Use arrow key to select "CD-ROM Drive", then use **"+"** or **"-"** to move it to the top. Go to **Exit** menu and select **"Exit Saving Changes"**. Accordingly, insert the Windows XP installation CD into optical disk drive with following the instructions on the screen to finish the installation.

DRIVER INSTALLATION NOTE:

+ ***Please be notified that whenever you install the driver utility, it should be install the CHIPSET Driver first.***

INSTALLING THE CHIPSET (SMBUS) DRIVER

Your notebook computer uses the advanced chipset. Installing the driver to enhance the stability and performance.

Installing Chipset device driver for Windows XP

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as **"E:\Drivers\WinXP\SMBUS\Setup.exe".**
3. Click **"OK"** to execute the setup program. The **Setup** box appears.
4. Click **"Next"** continuously to install this driver when screen displays this command.

5. Click **"Yes"** to accept the License Agreement .
6. Tick the option **"Yes, I want to restart my computer now.",** and press **Finish** to restart your system.

INSTALLING THE VGA DEVICE DRIVER

Following is the procedure for installing the Video Accelerator 3D Adapter VGA driver to your computer:

Installing VGA device driver for Windows XP

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as. **"E:\Drivers\WinXP\VGA\Setup.exe".**
3. Click **"OK"** to execute the setup program. The **Setup** box appears.
4. Click **Next** to install this driver when screen displays this command.
5. Click **"Yes"** to accept the License Agreement .
6. Tick the option **"Yes, I want to restart my computer now.",** and press **"Finish"** to restart your system..

INSTALLING THE CONTROL PANEL OF VGA UTILITY

Installing the utility of control panel for VGA Driver

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as. **"E:\Drivers\WinXP\Control Panel\Setup.exe".**
3. Click **"OK"** to execute the setup program. The **Setup** box appears.
4. Click **"Next"** continuously to install this driver when screen displays this

command.

5. Click **"Yes"** to accept the License Agreement.
6. Click **"Next"** to continue the following step.
7. Tick the option **"Yes, I want to restart my computer now.",** and press **Finish** to restart your system..

INSTALLING THE AUDIO DEVICE DRIVER

Your notebook computer uses the Realtek Audio controller.

Installing Audio device driver for Windows XP

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as.
   "E:\Drivers\WinXP\Audio\Setup.exe"
   where the audio driver is located.
3. Click **"OK"** to implement the setup program to install this driver.
4. Click **"Next"** to continue the following steps.
5. Tick the option **"Yes, I want to restart my computer now.",**

   and press **"Finish"** to restart your system.

INSTALLING THE MODEM DEVICE DRIVER

Please follow the procedures below for installing the Modem driver:

Installing Modem driver for Windows XP

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click **Browse** button and navigate to the directory as
   "E:\Drivers\WinXP\MDC Modem\ssetup.exe"

3. Click **"OK"** to implement the setup program to install this driver.
4. Click **"OK"** to install the modem driver.

+ ***Please be notified that whenever you install the TouchPad and Keyboard Controller driver , it should be install the Keyboard Controller Driver first .***

INSTALLING ENE - KEYBOARD CONTROLLER DRIVER

Installing ENE- Keyboard Controller driver for Windows XP

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as. **"E:\Drivers\WinXP\KBC\Setup.exe".**
3. Click **"Next"** to execute the setup program.
4. Tick the option **"Restart Windows now.",** and press **Finish** to restart your system.

INSTALLING ALPS - TOUCH PAD DRIVER

Installing ALPS - Touch Pad driver for Windows XP

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as. **"E:\Drivers\WinXP\Touch Pad\Setup.exe".**
3. Click **"OK"** to execute the setup program. The **Welcome** box appears.
4. Click **"Next"** to install this driver when screen displays this command.
5. Tick the option **"Yes, I want to restart my computer now.",** and press **Finish** to restart your system.

INSTALLING THE WIRELESS LAN DEVICE DRIVER AND UTILITY

INSTALLING THE WIRELESS LAN DRIVER

Please follow the procedures below for installing the Mini PCI Adapter driver:

Installing Wireless LAN driver for Windows XP

1. Click the **Start** button and then click **Run**. The **Run** dialog box appears.
2. Click **Browse** button and specify the directory as **"E:\Drivers\Winxp\Wireless Lan\Setup.exe"**
3. Click **"OK"** to continue installing the WLAN driver.
4. Click **"Next"** continuously to install this driver when screen displays this command.
5. Click **"Yes"** to accept the License Agreement.
6. Click **"Next"** to continue the following step.
7. Click **"Finish"** to complete it.

INSTALLING THE LAN DEVICE DRIVER

Please follow the procedures below for installing the LAN driver:

Installing LAN driver for Windows XP

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as. **"E:\Drivers\Winxp\Lan\setup.exe"**

3. Click **"OK"** to implement the setup program to install this driver.
4. Click **"Next"** to continue the following steps.
5. Click **"Yes"** to accept the License Agreement.

INSTALLING SILENT MODE & RF ON_OFF UTILITY

Installing Silent Mode & RF On_Off Utility for Windows XP

1. Click the **Start** button, then point to **Run**. The **Run** dialog box appears.
2. Click the **Browse** button and specify the directory as.
   "E:\Drivers\WinXP\Slient Mode&RF On_Off\PM setup.exe".
3. Click **"OK"** to execute the setup program. The **Welcome** box appears.
4. Click **Next** then click **Install** to setup this driver when screen displays this command.
5. Tick the option **"Finsih"** to complete.

2.6 Turning off Your Computer

If you are not going to use the computer for a while, it is best to turn off the power of the computer for longer use. Before turning off the power, you need to close first all application programs and shutdown the operating system.

After turning off the computer, make it a habit to leave the LVDS panel open for a while whenever used for an extended period of time. This allows the inside parts of the computer to cool off. Closing the panel will force the heat up against the LCD screen, which may degrade the LCD when done regularly. More importantly, never close the LVDS panel for a long period of time when computer is on and power saving features are disabled.

3 Using Your Notebook

This chapter describes how to operate the standard built-in features of the notebook that you normally would use in your day-to-day computer work. If you are new to computers and to your operating system, you also need to read the manual for the operating system on how to work with your computer. It is very important to familiarize yourself well with the operating system. The succeeding chapters not only guide you to go beyond the basics, but also try other exciting features.

3.1 Starting Your Operating System

The operating system is a must ingredient in using your computer. Without an operating system, it is like playing chess without the chessboard. It is the platform for all your software application programs to run on. The most popular operating system today is Microsoft Windows. You should have installed one operating system by your dealer unless you are an expert computer user and would need a more powerful operating system. If you have an operating system already installed in your computer, then you would be up and running after you power on your computer and boot up the system. Check your operating system manual on how to run it.

3.2 Understanding the Keyboard Functions

Your notebook computer is equipped with an 87 keys keyboard that provides all the functionality of a full-sized 101 or 102-key keyboard. Aside from the standard typewriter-layout keyboard of your computer, there are a number of extra features and function controls on the built-in keyboard including Windows system hot keys.

1. Function Keys
2. Control Keys
3. Windows Start Menu Key
4. Control Keys
5. Windows Shortcut Key
6. Cursor Control Keys

Keyboard

Key features and operations are described below:

- **Function Keys**
  Function keys are application-driven, like **F1** through **F12** can be found on the keyboard. These keys work together with the **Fn** key to activate special functions. Some keys (printed in blue on keypad) are preprogrammed with dual functions.

- **Control keys — Ctrl**, **Alt**, **Fn**, and **Shift** are controls used in conjunction with other keys to change their functions. To use control keys, press and hold the control key while pressing another key. For example, "Press **Ctrl-C**" means to hold down the **Ctrl** key and type the letter **C**. Key combinations work especially to the application you are running.

- **Windows keys**
  Use the following two keys to facilitate your work:

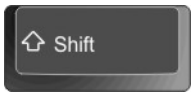
  ⇓ Start Menu key
  Displays the Start menu.

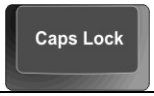
  ⇓ Shortcut/Application key
  Provides quick access to shortcut menus. This key acts like a right mouse button.

- **Cursor Control keys**
  Cursor control keys let you position the cursor on the screen where you want. In the screen, the cursor is a blinking underline, block, or vertical bar depending on the application. The cursor indicates where the next text typed is inserted.

- **Typewriter keys**
  Typewriter keys (also called *alphanumeric* keys) are used to enter text and characters. Keys with blue print on them behave differently when combined with control keys.

BASIC KEYBOARD FUNCTIONS

Keypad	Function Description
	<**Enter**> key. Execute a command. Within many text editing application programs, the <Enter> key inserts a hard carriage return, just like what ordinary typewriter does.
	<**Esc**> key. Press this key to cancel or escape from a command or function.
	<**Ins**> key. Known as the Insert key. Press this key to toggle the keyboard data entry from insert to type over mode.
	<**PrtScr**> key. Known as the Print Screen key. Press this key to map the whole screen to share memory for your specific usage.
	<**Del**> key. Known as the Delete key. Press this key to delete the character to the right of the cursor, or delete marked texts or items.
	<**Pause**> key. Press this key to temporarily halt execution of a command. Pressing any other key to resume execution of a command.
	<**Backspace**> key. Press this key to delete the character to the left of the cursor.
	<**Shift**> key. Press this key in combination with alphabet letters to produce uppercase letters in typing. Use this key in combination with those two-character keys (found on the second row of the keyboard) to produce the upper marked keys. Also used in most application program in combination with other keys to execute a certain command.
	<**Tab**> key. Press this key to move the cursor to the next tab stop on the right. This key works much the same as in ordinary typewriter.

Keypad	Function Description
	<**Ctrl**> key. Known as the Control key. Used in most application program in combination with other keys to execute a certain command.
	<**Alt**> key. Known as the Alternate key. Used in most application program in combination with other keys to execute a certain command.
	<**Fn**> + <**Num Lock**> key. Activates the embedded 15-key numeric keypad. The keys are color coded blue.
	<**Caps Lock**> key. Used in most application program to always activate uppercase alphabet characters.
	<**Fn**> + <**Scroll Lock**> key. Used in most application program to scroll the screen without having to move the cursor.

CURSOR CONTROL KEYS

Keypad	Function Description
	Up arrow key. Moves the cursor up one line at a time.
	Down arrow key. Moves the cursor down one line at a time.
	Left arrow key. Moves the cursor to the left one space at a time.
	Right arrow key. Moves the cursor to the right one space at a time.

SCREEN CONTROL KEYS

Keypad	Function Description
	<**Home**> key. Moves the cursor to the beginning of a screen or line.
	<**PgUp**> key. Moves the cursor up one screen at a time
	<**PgDn**> key. Moves the cursor down one screen at a time
	<**End**> key. Moves the cursor to the end of a screen or line.

WINDOWS HOT KEYS

Keypad	Function Description
	<**Start**> key. Pulls up the Windows Start menu.
	<**Right Click**> key. Performs a mouse right-click function for Windows system.

SPECIAL FUNCTION KEYS

The notebook has special system function keys that activate key serving dual functions. When pressed in conjunction with the <**Fn**> key, these keys set specific system parameters and are sometimes referred to as "hot keys".

Keypad	Function Description
	Switches display between LCD, CRT, or LCD and CRT simultaneously.
	To shut down or resume the built-in system speaker volume.
	Increases the brightness of LCD display incrementally.
	Decreases the brightness of LCD display incrementally.
	Decreases the audio volume of the notebook incrementally.
	Increases the audio volume of the notebook incrementally.

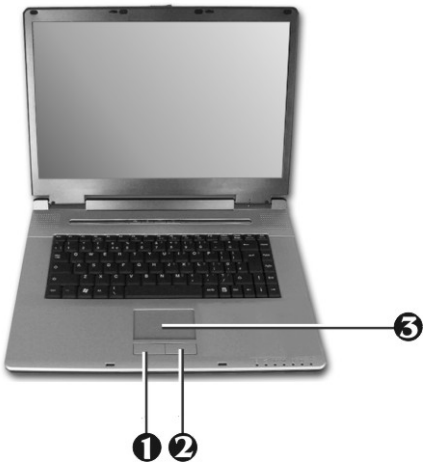
3.3 Using the Glide Pad Pointing Device

Your computer comes with a built-in Glide Pad pointing device that is found on the center of the palm-rest surface.

The Glide Pad offers a number of options that let you customize how it

functions. To access these options, locate the **Control Panel** and double click on the **Mouse** icon. The options let you control the size and color of the cursor, cursor speed, the accepted double-click speed, and selection button orientation.

The Glide Pad works a mouse pointing device replacement that is used under Windows-based operating system. You can use the standard Microsoft driver that is compatible with the Glide Pad device and is normally used under Windows-based operating system. However, if you want to utilize the added features of the Glide Pad, you may want to try installing its own device driver that comes with added utilities for enhancing the function of the device.



1. Left Selection Button 2. Right Selection Button
3. Glide Pad

Glide Pad Features

Here how to use the Glide Pad pointing device:

1. The rectangular surface acts like a miniature duplicate of your display screen. To move the mouse cursor, place the finger lightly on the sensor pad and move in the desired direction. If you reach the end of the pad, lift your finger and place it back down on the other side of the pad.
2. To select an item, click on the item by pressing the left button control or by simply tapping on the surface once. A light, quick tap always works best. To execute an item, click the left button twice or do a quick double tap on the surface.
3. To simulate holding the mouse button down (dragging an icon or selection), use the tap-and-drag gesture. This feels much like a double-click, except that the finger remains on the pad after the second tap: Tap, lift, tap, hold and move. The simulated button remains held as long as the finger remains on the pad.

+ ***Avoid spilling any liquid on the Glide pad surface and always keep the Glide pad surface and pointing finger dry from sweat built-up. Also do not expose Glide pad to any magnetic source object.***

3.4 Configuring Your Screen Display

The VGA display function of your notebook is based on a high performance AGP local bus controller and is fully VGA compatible. This controller offers a large set of extended functions and higher resolutions especially useful when you are connecting an external high-resolution and high-frequency CRT or LCD.

Please Refer to Section 5 "Installing the Notebook Device Drivers" of Chapter 2 in this manual for the procedures on how to install the VGA device driver under Windows. After installing the VGA driver, you would then configure the display resolution or screen size to match your LCD display panel. This

notebook computer model provides Wide screen 15.4" 1280x800 (Wide XGA) resolution panels. You would also probably want to set the amount of color output to display sharper images and photos.

POSSIBLE DISPLAY CONFIGURATIONS

The table below shows you the possible display resolution you can set when using either the LCD display or the external monitor (CRT):

Display	Possible Resolution	Maximum Colors
Widescreen 15.4" WXGA LCD	1280x800 (Maximum Resolution)	16 million colors
CRT Only	800x600	16 million colors
	1024x768	16 million colors
	1152 x 768	16 million colors
	1280x1024	16 million colors

+ ***65,536 or 64K colors is also equivalent to 16-bit high color while 16 million or 16M colors is equivalent to 32-bit true color.***

+ ***You can use the <Fn> + <F3> hot-key to switch the display between LCD only, CRT only, or both LCD and CRT display.***

CHANGING THE DISPLAY PROPERTIES UNDER WINDOWS

To change the display properties of your screen under Windows system, just right-click on the desktop area and select Properties or go to the Control Panel and click on the Display icon. The Display Properties dialog box will appear on your screen. Click on the Settings tab to set your desired configuration. Make sure to follow the configuration table above.

+ ***If you cannot configure the display properties, change the display driver first as mentioned on Section 5 "Installing the Notebook Device Drivers" of Chapter 2 in this manual. Consult your dealer for the latest Windows VGA driver.***

3.5 Knowing the Power Saving Features

One of the great features in your notebook computer aside from its superior performance is the ability to save energy power. Your computer is designed to incorporate intelligent and advanced power management functions that turn off power of most components when system is idle or not in use. This feature not only gives you longer battery hours but cooler systems and components as well. For more information on how to control the power management features of your computer, refer to **Power Options** function in **Control Panel** of Windows.

The definitions of Standby Mode, Hibernation Mode, and Shutdown are depicted as follows:

Standby Mode

Standby Mode is mainly for power saving. When the Standby Mode is activated, your display and hard drive are shut down and all open applications and documents are stored in RAM (Random Access Memory). This allows your notebook to wake up quickly, but a low level of power is required to maintain this suspended state. How quickly your system powers down into Standby mode is up to you by setting proper times in Power Options of Control Panel in Window. While the notebook is in Standby mode, the LED of power indicator flashes. To resume your working again, you can press the power button to return your work to the screen where you left off.

Hibernation Mode

In Hibernation mode, all system devices are powered down and the contents of RAM are stored on your hard drive. Hibernate mode uses less power than Standby mode, but takes a bit longer time to resume. When your notebook goes into hibernation, Windows saves your entire desktop state before powering down your computer. You don't need to save and close each document before you put your notebook into hibernation. When you press power button again, system will bring your notebook out of hibernation. You'll find your applications and documents open on your desktop exactly as you left them.

+ ***Hibernation is enabled by default. To verify that Hibernation is enabledd, Click Start, point to Settings, and then click Control Panel. Choose Power Options icon, then click on the Hibernate tab. IF the chock box of Enable Hibernate is selected, the Hibernation mode is enabled.***

Shutdown

All power has been turned off from the notebook. This means that no power including external AC power source and battery power source will be consume by the notebook.

3.6 Working with the Built-in HDD

Your notebook computer is equipped with a built-in large capacity 2.5 inch IDE hard disk drive where you store or install your computer operating system and all application software programs. You need to format the hard disk before using. The internal hard disk is normally assigned as Drive C after formatting. Sometimes divided into two partitions, adding a Drive D. Since your computer supports different hard disk capacities (up to 80 GB), you also

need to setup the disk type first on your computer's BIOS SETUP program before formatting the disk drive. Your computer supports Auto-detect hard disk type, so you do not need to set it manually. Your dealer should already have done all of this for you. You can refer to **Chapter 6** on how to run the BIOS SETUP program.

You can increase the system's storage capacity by replacing the standard hard disk drive with a drive of greater storage capacity.

+ ***If you wish to replace your hard disk, contact your local dealer for more information about this dealer-installable device.***

+ ***Always turn off your computer first before removing the hard disk drive. Failure to do so will damage the computer and the hard disk. Avoid jarring or moving the computer while the hard disk is still being accessed.***

3.7 How to Access the Optical Drive

Your system ships with an optical disk drive installed on the left side of your computer. You would normally use the drive for installing operating system and software application programs.

To insert and remove a disc on the drive:

1. Make sure the computer is turned on. Press the eject button found on the door cover of the combo drive. The CD tray mechanism will pop-out slightly and slowly pull out the whole length of the tray.
2. Place the disc on top of the CD tray with the label side facing up. Gently press the compact disc onto the center spindle to secure the disc.

3. To remove the disc, press on the center spindle and pull up the disc from the side until the disc snaps out of the spindle lock.

+ ***If the eject function is disabled by software or a power failure occurs, the Emergency Eject Hole allows you to manually remove a CD from the reader.***

4. To close the combo drive, simply push the CD tray inside. The combo drive LED will activate when the disc is detected. Wait until the LED has turned off and then start to read the disc.

How to care the CD

When you handle CDs, pay attention to the following guidelines:

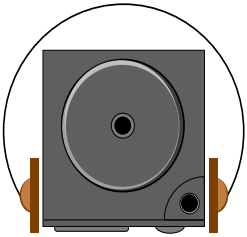
- Always pick up the CD by its edges.
- Avoid scratching or soiling either side of the CD.

- Do not write with the hard ball-point pen or apply labels on either side of the CD.
- Keep the CD away from direct sunlight or high temperatures.
- Clean fingerprints or dust from the CD by wiping it with a soft cloth.

The above points also apply to other optical storage media.

+ The Combo drive is a Class 1 Laser Product.

4 Fun with Multimedia



This chapter lets you make full use of all the multimedia features of your computer in having fun and excitement during work or leisure. You will learn how to mix and match the built-in sound system, use Combo drive in creating an exciting full multimedia presentation.

4.1 Notebook Multimedia Features

Your notebook computer is rich in multimedia features that make your computing fun, comfortable, exciting and easy. Your computer is well able to perform all multimedia tasks through the following:

- Intel® Celeron® M Processor Dothan
- Up to 2GB DDR SDRAM
- DVD/CD-RW Combo or DVD Dual (Optional)
- Integrated ATI RC410MB graphics engine.
- 16-bit Audio Sound System with built-in speaker and microphone.

4.2 Audio Sound System Features

Your computer has a built-in 16-bit stereo sound controller that allows you to record, store, and playback voice, music and other sound effects with built-in mixer controls. An integrated full-duplex microphone and twin mini-speakers are also built-in into your computer to allow you to record and playback sound anytime and anywhere.

On the left side of your computer, you will find the audio ports that include the following:

- External 1/8-inch microphone jack that connects external microphone for recording purpose.
- Earphone or headphone jack for personal listening.
- SPDIF out port for digitized audio signal transmission.

- Sound volume adjust by K/B hot-key

4.3 Setting up the Audio Driver Properties

Before you can start using the audio capabilities of your computer, you need first to setup properly the audio driver after installing Windows. If you bought your computer with Windows pre-installed, it is most likely that your dealer have configured the sound driver for you. If not, you must refer to Chapter 2 on how to setup the sound drivers for Windows.

4.4 Windows Multimedia Programs

Windows provides several multimedia programs that you can run with the built-in features of your computer. Pointing the **Start** button, **Programs**, **Accessories**, then **Entertainment**, you will find the Multimedia programs group. (The section below use Window XP as examples)

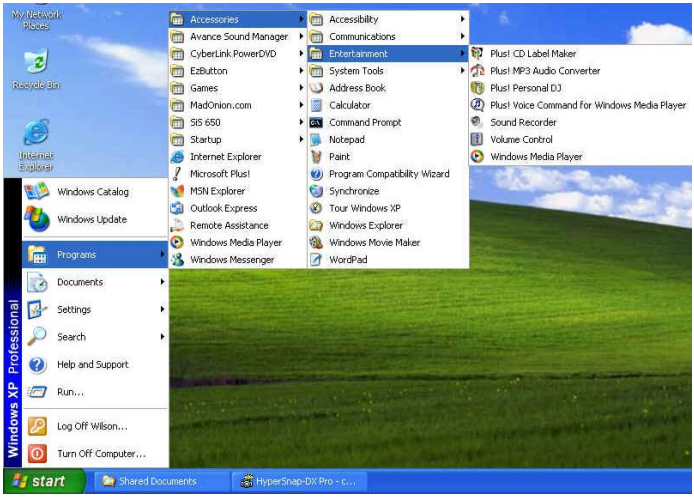


Figure 4-1 Entertainment Programs Group

The standard multimedia components are as follows:

- Windows Media Player - for playing sound, video and animation files
- Sound Recorder - for recording sounds and playback
- Volume Control - for adjusting the volume of mixer

+ ***For more information on how to operate these multimedia components, run the program and click on the Help menu.***

4.5 Recording Sounds

Your computer allows you to record voice and other sounds in several ways and stores them as files on your hard disk. These voice or sound files can then

be played back through the internal speaker or earphone jack using an external speaker, headphone, or earphone set. You can also use the files as voice annotations on many applications for more real presentation. This section will describe briefly how you can record sounds under Windows operating system.

To record sounds, you need to run the Sound Recorder program from the Multimedia program groups. The control buttons of the Sound Recorder are simple to understand which comprise of the Fast Rewind, Fast Forward, Play, Stop, and Record buttons. Click the Help menu on how to operate the Sound Recorder.

Figure 4-2 Sound Recorder

The Sound Recorder also allows you to record sound from different input audio source like the following:

- From the external microphone
- From the Combo drive

Since you could record sound from different input sources, you must first set the proper audio input recording device under the Recording Control panel. To do this:

1. Double-click on the Volume Control on the taskbar or click **Start** button, then point to **Programs**, **Accessories**, **Entertainment** and then click on Volume Control.

2. Click **Properties** in the Options main menu.

3. Click the round button for Recording and tick off each component that list in the "Shows the following Volume Controls" box.

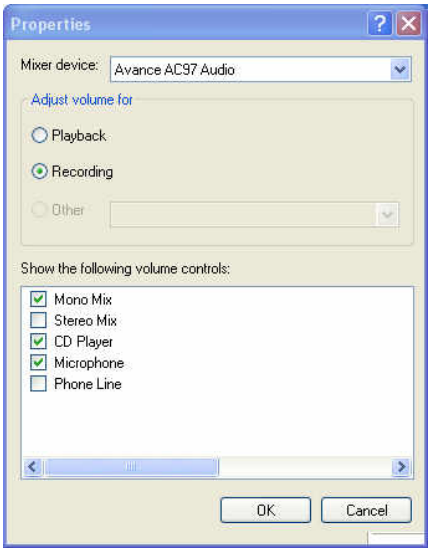


Figure 4-3 Audio Properties

4. Click **OK** and the Recording Control dialog box will appear. Here, you will select the input device for the recording source. If you want to record from the Combo drive with audio music, you must click on CD Player.

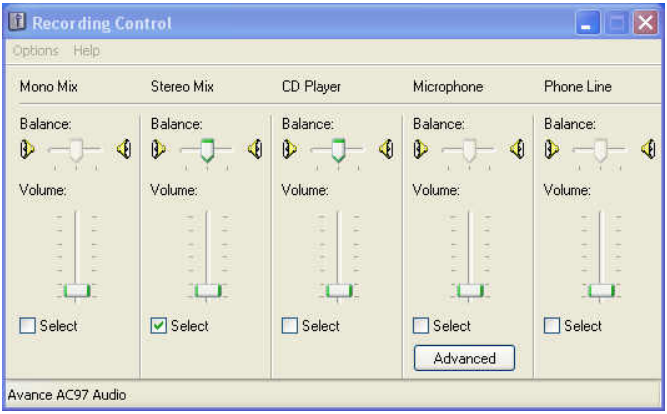


Figure 4-4 Recording Volume Control

USING AN EXTERNAL MICROPHONE

Your computer allows you to connect an external microphone for high quality recording. The external microphone jack is found on the left side of your computer. Use only microphone with 1/8-inch mini-jack connector. Follow the same procedure for recording voice.

USING THE BUILT-IN COMBO DRIVE

You would normally use the Combo drive for recording audio music from the Audio CD. Follow these steps:

1. Activate CD Player volume on the Recording Control as discussed earlier.
2. Run the Sound Recorder program.
3. Insert the audio CD into the Combo drive. Unless you have disabled the CD auto-insertion notification for supporting Suspend mode, the CD Player should automatically run after you have inserted an audio compact disc and will start playing the audio CD.

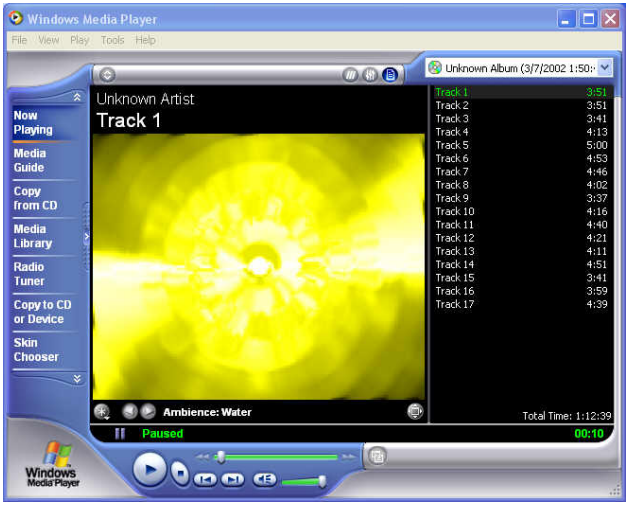


Figure 4-5 Play Audio CD by Windows Media Player

4. Select the starting point where you want to start recording.
5. Switch to the Sound Recorder and press the Record button.
6. Switch immediately to the Windows Media Player and press the **Play** button. You can adjust the volume control so you can also hear the music while in recording.

4.6 Playing Audio and Sound

Your computer has built-in twin speakers to playback audio and sound. You can also adjust the volume manually by adjusting the volume control hotkeys found on the keyboard.

For more quality sound output, you can choose to connect an external amplified speaker or earphone from headphone jack. Always minimize the volume first before placing the phone set to your ear.

USING THE WINDOWS MEDIA PLAYER

The easiest way to playback multimedia media files is to run the Windows Media Player. Follow these steps:

1. Click on **Start**, point to **Programs**, **Accessories**, and then **Entertainment**.
2. Click on **Windows Media Player** to start program.
3. Click on the File menu and select the file you want to play.
4. When the file is recognized and open, click on the **Play** button to start playback.

4.7 Playing Video and MPEG Files

Your computer is capable of running video motion files as well as MPEG (Motion Picture Expert Group) files on CD, DVD, or CD-RW. By using software MPEG program, you can watch real full-motion picture on your computer. You can also run the Windows Media Player under the Entertainment programs group as well to show all media device programs.

Figure 4-6 Windows Media Player

4.8 Using DVD

DVD is the breakthrough in superb full-motion picture playback. One disc can contain at least 4.7GB of information, capable of holding one full-length movie with soundtracks, subtitles, and different languages. Much more, the DVD-ROM drive of your computer is backward compatible with CD-ROM drive so it allows you to use any CD as well. It also works the same as the CD-ROM.

To playback DVD titles, you would need a software MPEG-2 program and the DVD-ROM drive at least. Your Notebook computer has installed Windows XP for operation system and its Windows Media Player supports DVD's playback..

You can use Windows Media Player to watch DVDs on your Notebook computer. Like a conventional DVD player, by using the Player, you can skip to specific **titles** and **chapters**, play sequences in slow motion, gain access to special features, and switch audio and caption languages. In addition to these conventional DVD player tasks, you can also retrieve information about each disc from the Internet.

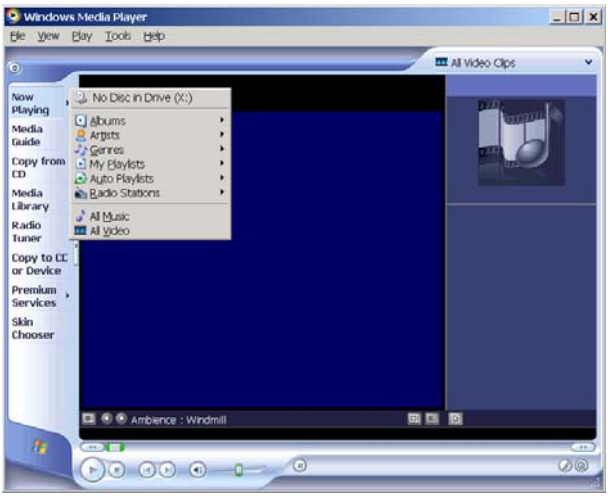


Figure 4-7 To play a DVD

On the Play menu, point to DVD, VCD or CD Audio, and then click the drive that contains the DVD. In the Playlist pane, click a DVD title, or chapter name, if appropriate.

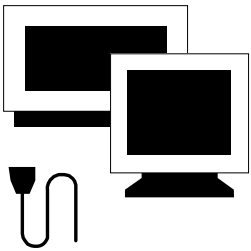
To eject a disc, on the Play menu, click Eject. To play a selected title in a DVD repeatedly, on the Play menu, click Repeat. A check mark appears next to the command to indicate it is turned on.

4.9 Using Rewritable Optical Disk Drive

DVD/CD-RW Combo or DVD+RW combo drive is a device that can write digital data to CD-R and CD-RW or DVD+R and DVD+RW media. With this device, you can backup your own data to CD-R or CD-RW disc for mass data storage and safely retaining. The CD-R disc can be written several times until the CD-R is full; the CD-RW disc, furthermore, can write and erase data repeatedly. Please refer to the related user manual about the CD-RW software.

+ ***Please pay attention to the copyright of the software or data you want to backup. Backup or distribute the software or data might be illegal according the restriction of the law.***

5 Connecting to Peripherals



This chapter describes how you attach peripheral devices to your notebook. You can attach a printer or mouse; connect an external monitor and keyboard, or any other peripheral device. You will learn how to use these peripheral devices with the step-by-step instructions depicted in this chapter.

5.1 Using the USB Port

USB (Universal Serial Bus) is a hardware interface that enables you to connect multiple devices (such as printers, mice, keyboards, storage devices, joysticks, digital cameras, and video conference cameras, etc.) to your notebook computer, and up to 127 devices can be attached. Besides, USB's hot swap capability allows everything to be plugged in and unplugged without turning the system off.

Microsoft, HP, Compaq, Intel, Agere, NEC and Philip are seven core members of USB-IF to have worked on USB 2.0 standardization. USB 2.0 offers data transfer rate up to 480Mbps (megabits per second) compared to USB 1.1 devices, which transfer at speeds of 12Mbps. So, you could know that USB 2.0 can transfer data between the computer and its peripherals 40 times faster than USB 1.1. However, USB 2.0 is fully backward compatible, you will be able to use a USB 1.1 device in a USB 2.0 compliant system.

+ ***Depending on your operational requirements, you may need to disable other ports in order to release system resource for the USB port.***

+ ***The USB bus distributes 0.5 amps (500 milliamps) of power through each port. For the purpose of power saving, please disconnect your USB device while not in use.***

5.2 Using an External Monitor Port

Your computer has a 15-pin Monitor port for supporting any external CRT or LCD color monitor. You need a display signal cable (usually provided with the monitor). One end of the cable must have a 15-pin connector for the system.

To connect an external monitor:

1. Turn off your computer and make sure the monitor power switch is turned off.

+ ***The notebook computer must be powered off or suspended while the monitor is being connected. Although you can connect the external Monitor without power off the computer and the external monitor, however, it is harmful to both devices and it shortens the life of these devices.***

2. Connect the connector cable of the monitor to the VGA port at the back of your computer. Secure the cable connection with the screws provided.
3. Connect the monitor power cable and plug it into a properly grounded wall outlet.
4. Turn on the power of the monitor.
5. Turn on your computer. Both the LCD panel and the monitor screen will show the display. Your computer is set at default to run at simultaneous display mode.

6. If you only want to show the display on the external monitor or projector and shut off the LCD display, you can use the <**Fn**> + <**F3**> hot-key to switch display type between LCD and external monitor. Keep pressing the hot-key until you get the display to external monitor only.

+ ***Refer to Chapter 3 regarding the possible External CRT resolutions and how to change the display properties.***

5.3 Using the TV Port

Also found at the right of your computer is one TV port (s-video).

To display your computer screen on the TV, please connect the TV port of this notebook to the Video Input of the TV set. You can press <**Fn**> + <**F3**> key continually to switch between TFT, external monitor, TFT + external monitor and TV only. Keep pressing the hot-key until you get the display to external TV only.

Or you can setup the detail by operate the computer as follows.

1. Turn off your computer and plug one end of the s-video jack cable to the end to the input video jack of your television set.
2. Turn on your computer and your television set.

3. Click the **Start** button, then point to **Settings,** and click **Control Panel**.

4. Double-click on the **Display** icon and point to **Setting** tab.
5. Click **Advanced** button and point to **Displays** tab. You can see the **TV** icon on the screen.
6. Please click the red button above the TV icon. Click **OK**, Windows now automatically detect the TV port and enable this function.

5.4 Using the External Audio System

At the left side of your computer, you will find the built-in audio ports. You can connect Microphone jacks, earphone or powered speaker.

To connect to a audio jack:

1. Locate the audio port (Microphone, Headphone) that you want to use to the target device.
2. Plug the jack into the port on the left side of the system.

+ ***If you use external speakers and experience the sound distortion or feedback, please lower the volume. Some factors is caused by too close locating the microphone and speakers from each other, moving away the external audio option from the unit may also help.***

5.5 Using the LAN Port

This notebook comes with an internal 10Base-T/100Base-TX LAN module that connects your computer to other computers/networks through a local area network (LAN) and supports data transfer rates at 10Mbps and can be up to 100Mbps. The 10Base-T standard also called Twisted Pair Ethernet is connected with RJ-45 connectors. The 100Base-TX is based on the older Ethernet standard. Because it is 10 times faster than Ethernet, it is often referred to as Fast Ethernet.

The built-in LAN module provides a standard RJ-45 connector.

To connect the twisted-pair cable to your LAN port:

1. Locate the twisted-pair cable in the accessories box in notebook shipping carton. Each end of the cable has a RJ-45 connector.
2. Connect one end of the cable into the network wall outlet or HUB.
3. Connect the other end of the cable into the computer RJ-45 LAN port.

5.6 Using the Wireless LAN

Wireless LAN is the major breakthrough in computer communication technology. It lets user connect to the LAN environment without using any wire to traditional RJ-45 jack. User can enjoy the wireless connection within the range of Access Point (AP) of LAN.

Access Point (AP) is the wireless transmission and receiving device, it generally connects to the server of a LAN environment or act as a LAN hub with wireless connection. Access point can be set in an office environment, airport, major railway station, etc. that depends on the construction of each country. In most case, you probably can use it at office, please consult with the network department of your company for more details.

This computer integrates built-in 802.11 b/g wireless LAN module. IEEE 802.11b standard supports 11 Mbps wireless connection speed. However, IEEE 802.11g supports 54Mbps wireless connection speed, and is backward compatible with the slower 802.11b. Wireless LAN module is similar to LAN module. You need to install software driver before using it. Please refer to chapter 2.5 on how to install the driver.

5.7 Using the Modem Port

This notebook comes equipped with a 56K internal fax/data modem that allows you to communicate with others via fax, email, or to connect to an online service or bulletin board.

The built-in fax/data modem provides on standard phone connector.

To connect the analog phone cable to your modem:

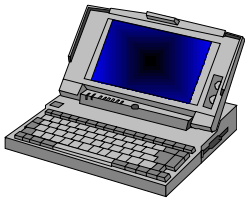
1. Locate the analog phone cable in the accessories box in notebook shipping carton. Each end of the cable has a RJ-11 connector.

2. Connect one end of the cable into a standard wall outlet.
3. Connect the other end of the cable into the computer modem port.

+ ***The speed of data transmission is dependent on the quality of telephone lines. Digitally terminated lines improve the speed of data transmission. Contact your service provider for more information.***

+ ***The analog phone cable is an industry standard cable. Longer cables are available at your local electronics store.***

6 Customizing Your Notebook



Your computer uses the Phoenix BIOS Setup program that allows you to set several system configuration in changing the way your computer performs. This includes your system time and date, disk drive configuration and password setup. This information is then stored in the CMOS RAM and will remain permanent unless you change it again. This chapter discusses on how you will activate the BIOS Setup program and change the system configuration to suit your desired operation. You must be careful to set the configuration properly in order for your computer to run smoothly. If you are not sure of any settings, contact your dealer.

6.1 Running the BIOS Setup Program

Your computer is likely to have been properly setup and configured by your dealer prior to delivery. However, you may find it necessary to use the computer's BIOS (Basic Input-Output System) Setup program to change system configuration information, such as the current date and time, or your hard disk drive type. The Setup program can be accessed when you power on the system and pressing the <**F2**> function key.

The settings that you specify within the Setup program are recorded in a special area memory called the **CMOS RAM**. This memory is backed up by a battery so that is will not be erased when you turn off or reset the system. Whenever you turn on the computer, the system will read the settings stored in the CMOS RAM and compare them to the equipment check conducted during the Power On Self Test (POST). If an error occurs, an error message will be displayed on the screen, and you will then be prompted to run the Setup Program.

As the POST (Power-On Self Test) executes during the boot up process, the screen will display the following message:

```
Press <F2> to Enter SETUP
```

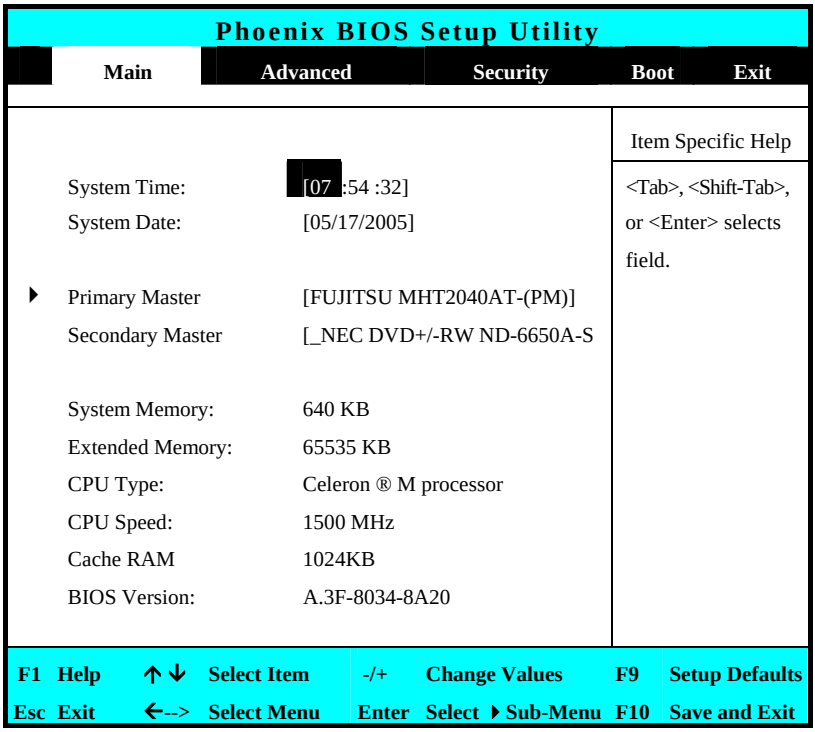
Press the <**F2**> key to run the BIOS Setup program. The BIOS Setup program is organized into five menus which you can select using the <-- and --> keys. To move from one option to another, you use the up and down arrow keys while using the <F5> and <F6>, or <+>and <–> keys to change the settings. On the right hand side of the screen are some brief help descriptions of each item you want to change.

On the BIOS Setup program, you will find the following parts on the screen:

- Item Specific Help
  The right side of the screen. This area describes each parameter and its available settings.
- Menu Bar
  The top line of the screen. Each of the five selections displays its own screen.
- Parameters
  The left side of the screen. This area lists the parameters and their current settings.
- Key Status Bar
  The bottom part of the screen. These lines display the keys available to move the cursor, select a particular function and so forth.

To exit the BIOS Setup program, simply press the <Esc> key and select from the Exit menu whether you want to Save changes and exit; Discard Changes and exit.

6.2 Using the Main Menu Setup


Phoenix BIOS Setup Utility
Main
Advanced
Security
Boot
Exit
Item Specific Help
System Time: [07:54:32]
System Date: [05/17/2005]
<Tab>, <Shift-Tab>, or <Enter> selects field.
Primary Master [FUJITSU MHT2040AT-(PM)]
Secondary Master [_NEC DVD+/-RW ND-6650A-S
System Memory: 640 KB
Extended Memory: 65535 KB
CPU Type: Celeron ® M processor
CPU Speed: 1500 MHz
Cache RAM 1024KB
BIOS Version: A.3F-8034-8A20
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←--> Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

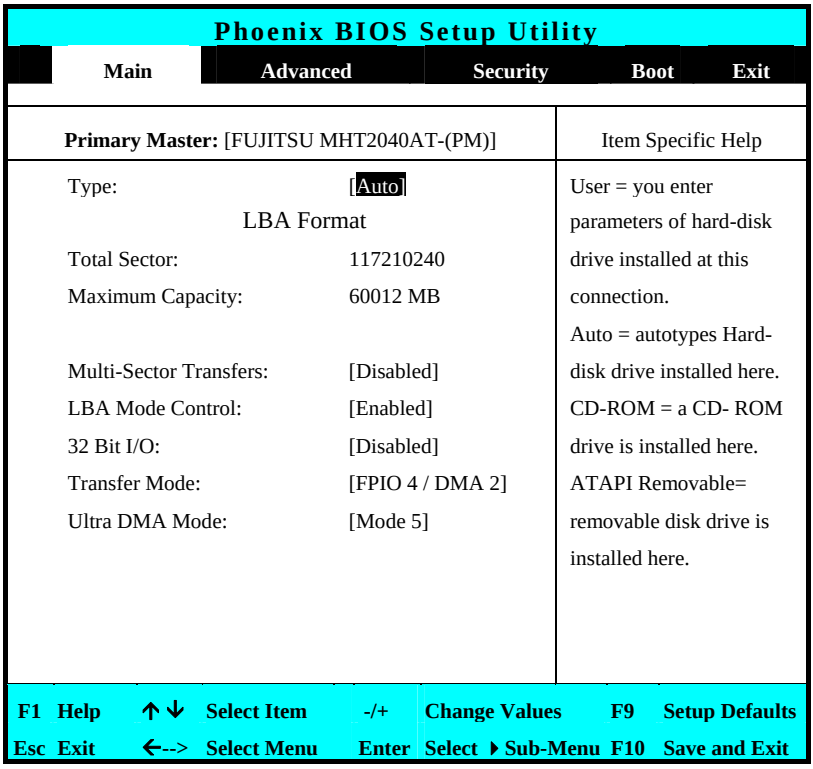
- System Time
  Allows you to change the system time using the hour:minute:second format of the computer.
  Enter the current time for reach field and use the <Tab>, <Shift>+<Tab>, or <Enter> key to move from one field or back to another.
  You can also change the system time from your operating system.

- System Date
  Allows you to set the system date using the month/date/year format. Enter the current time for reach field and use the <Tab>, <Shift>+<Tab>, or <Enter> key to move from one field or back to another.
  You can also change the system time from your operating system.
- Primary Master
  This field display various parameters for the hard disk drive. If type [Auto] is selected, the system automatically sets these parameters. If type [User] is selected, Cylinders, Heads and Sectors and other value can be edited.
- Secondary Master
  This field is for information only as the BIOS automatically detects the optical drive.
- System Memory
  This field reports the amount of base (or conventional) memory found by the BIOS during Power-On Self-Test (POST).
- Extended Memory
  This field reports the amount of extended memory found by the BIOS during Power-On Self-Test (POST).
- CPU Type
  This field reports the CPU type information detected by the BIOS during Power-On Self-Test (POST).
- CPU Speed
  This field reports the CPU speed information detected by the BIOS during Power-On Self-Test (POST).
- Cache RAM

  This field reports the CPU L2 Catch information detected by the BIOS during Power-On Self-Test (POST).

- BIOS Version
  This field is for information only as the BIOS displays the BIOS version during the Power-On Self-Test (POST).

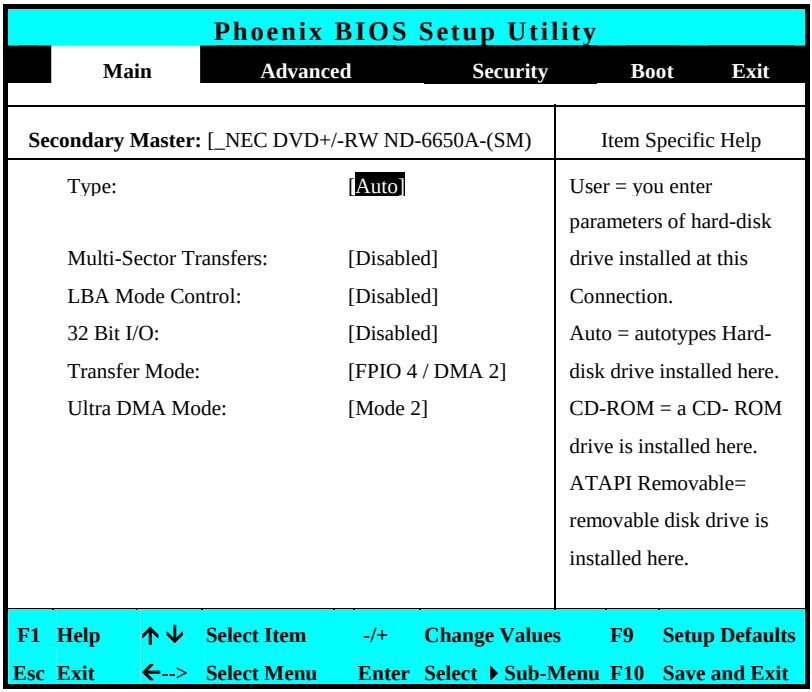
6.2.1 INTERNAL HDD SUB-MENU


Phoenix BIOS Setup Utility
Main
Advanced
Security
Boot
Exit
Primary Master: [FUJITSU MHT2040AT-(PM)]
Item Specific Help
Type: [Auto]
LBA Format
Total Sector: 117210240
Maximum Capacity: 60012 MB
Multi-Sector Transfers: [Disabled]
LBA Mode Control: [Enabled]
32 Bit I/O: [Disabled]
Transfer Mode: [FPIO 4 / DMA 2]
Ultra DMA Mode: [Mode 5]
User = you enter parameters of hard-disk drive installed at this connection.
Auto = autotypes Hard-disk drive installed here.
CD-ROM = a CD- ROM drive is installed here.
ATAPI Removable= removable disk drive is installed here.
F1 Help ↑ ↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←--> Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

Use the Type field to select the drive type installed. You can select different drive types as **CD-DVD**, **User**, **Auto** or **None** by pressing <**Space**> bar. Set this option to Auto so your computer will automatically detect the drive type

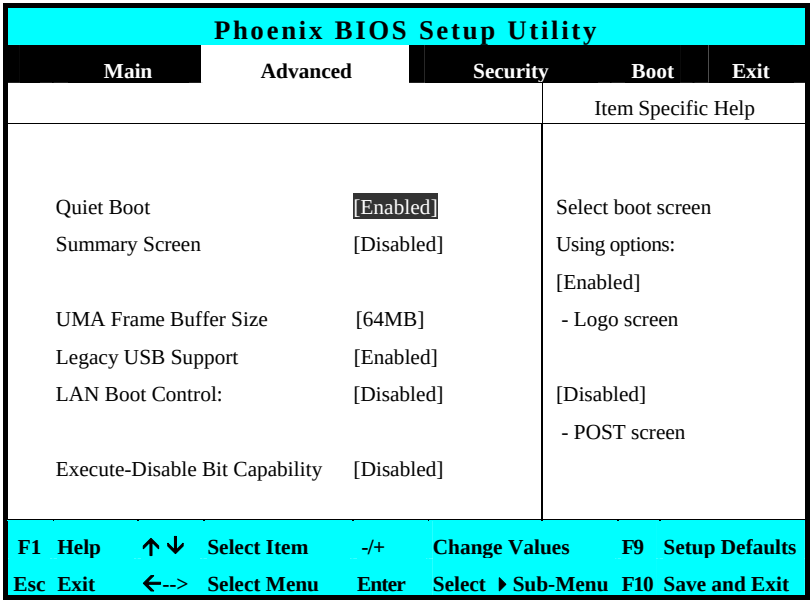
during power on. Set this option to None when your computer is not installed any devices. Press <**Esc**> to return to the Main Menu.

6.2.2 INTERNAL OPTICAL DRIVE SUB-MENU



Use the Type field to select the drive type installed. You can select different drive types by pressing <**Space**> bar. Set this option to Auto so your computer will automatically detect the drive type during power on. Set this option to None when your computer is not installed any devices. Press <**Esc**> to return to the Main Menu.

6.3 Using the Advanced CMOS Setup

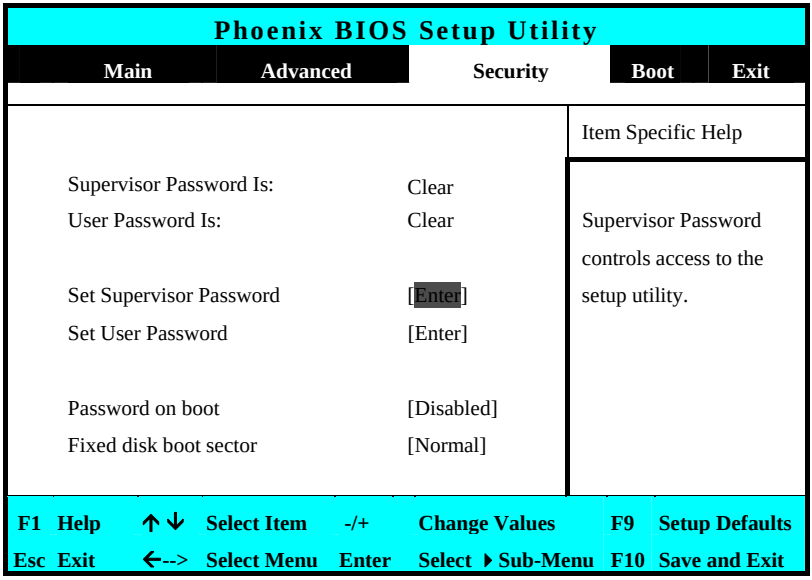


- Quiet Boot
  Lets you specify the boot screen to Logo screen or POST screen by choosing Disabled or Enabled, respectively.
- Summary Screen
  Displays system configuration on boot.
- UMA Frame Buffer Size
  Lets you reserve memory space [32MB]/[64MB]/[128MB] for UMA frame buffer for video devices. The default value is [32MB].

- Legacy USB Support
  Enable or disable the USB Bus support when in connection with USB device.
- LAN Boot Control:
  Lets you specify Enabled or Disabled for booting the notebook from Network or not.
- Execute-Disable Bit Capability

  When disabled, forces the Execute-Disable Bit Capability extended feature bit to always return 0. When disabled, forces the Execute-Disable Bit Capability extended feature bit to always return 0.

6.4 Security Menu Setup



- Supervisor Password Is
  Set/Clear selections show that the notebook is under controlled by Supervisor Password or not.

- User Password Is
  Set/Clear selections show that the notebook is under controlled by User Password or not.

- Set Supervisor Password
  Supervisor password gives you the authority in accessing the setup utility. You also need to enter this password in system booting and resuming from suspend mode. When you press <**Enter**> in this field, the Set Supervisor Password dialog box appears. Enter a new password with up to 8 alpha-numeric characters, and then re-enter it for confirmation.

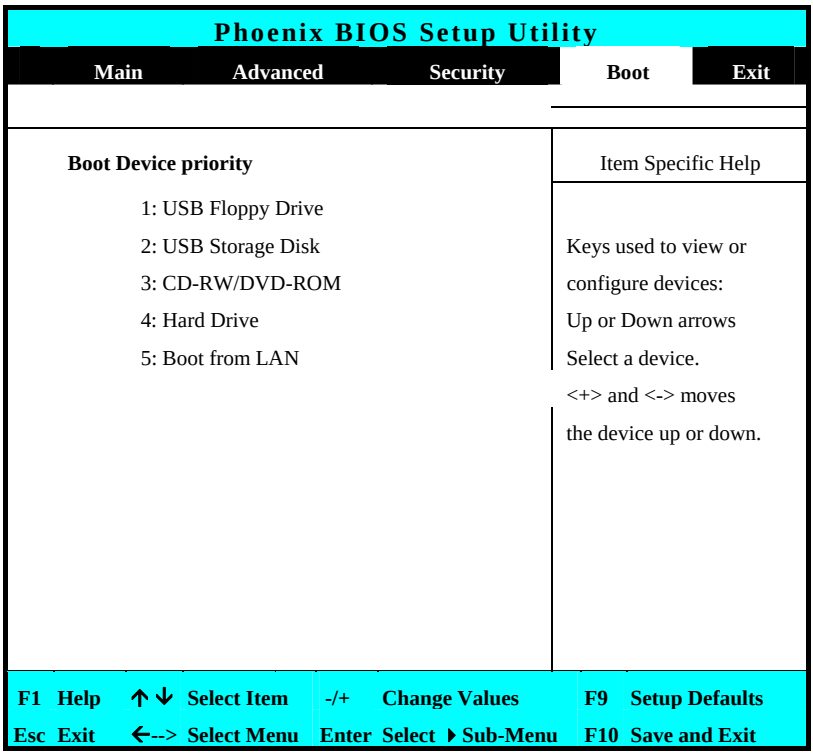
- Set User Password
  This field is only available when Supervisor Password has set. Enter the user password when boot the system or resume from suspend mode. But if the Write Protect is set in the Fixed disk boot sector field, you should enter a supervisor password to access the fixed disk when boot the system or resume from suspend mode.

- Password on Boot
  If you set this field to Enabled, your computer will always ask for the password every time you boot your computer.

- Fixed Disk Boot Sector
  If you set this field to Write Protect, the write protect boot sector on hard disk will protect against viruses. In this situation, only the supervisor can access the Boot Sector of fixed disk.

6.5 Using the Boot Setup

This item allows you to set the search drive sequence where the system will try to boot up first.

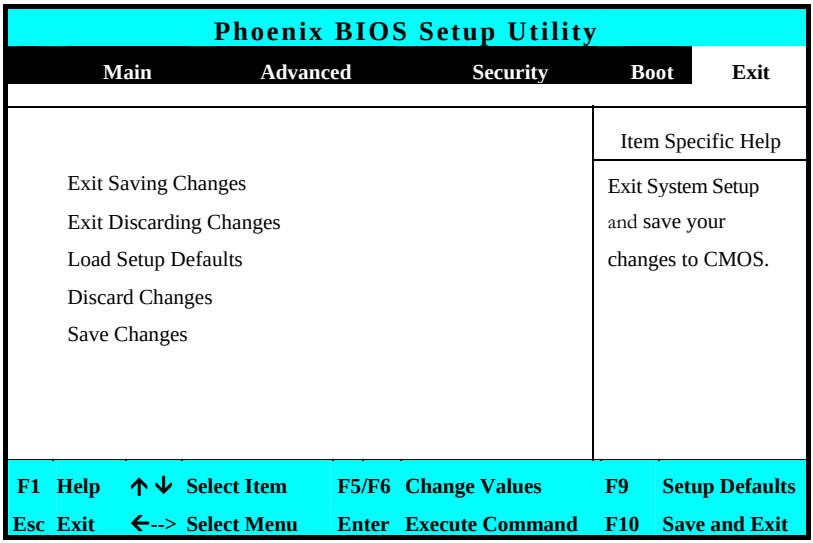


This page allows you to set the search drive sequence where the system will try to boot up first.

To select the boot device, you can use the up or down arrow key, then press <+> to move up the device in the list or press <-> to move down the device in the list. To exit from this menu, press <**Esc**>.

6.6 How to Exit the Setup Program

There are two choices to escape from the Setup program.



- Exit Saving Changes
  Saves all changes to CMOS while running the BIOS setup program and exit from the system setup program.
- Exit Discarding Changes
  Allows you to discard all changes made while running the BIOS setup program and exit from the system setup program.

- Load Setup Defaults
  Lets you load the default values for all setup items.
- Discard Changes
  Reverts to previously selected settings.
- Save Changes
  Saves Setup data to CMOS.

6.7 How to Upgrade the BIOS

Your computer uses EPROM Flash BIOS chip that allows you to easily upgrade the BIOS program. When you update the BIOS, any customized settings you made are lost.

To upgrade the BIOS:

1. Insert the BIOS Update diskette into the diskette drive.
2. Power on the system with the diskette in the diskette drive.
3. On the DOS prompt, type the following command.

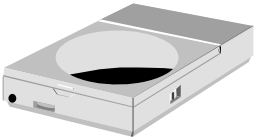
   A:\>Phlash *XXXXXX.ROM (BIOS filename) or*
   A:\>*XXXXXX.BAT (Batch file for BIOS file)*
   Press <Enter> to run this BIOS utility. After the system has been successfully run this program, a message similar to the following appears:

   ```
   Flash memory has been successfully programmed,
   press any key to restart the system. If the
   system does not restart, turn it off, then turn
   on again.
   ```

4. Press any key to restart this system.

Contact your dealer for the latest BIOS update file.

7 Using Options



This chapter describes the advanced features and expandable architecture in your notebook. You can upgrade your system for specific requirements.

System Upgrade

This section provides some steps in doing system upgrade for your notebook computer. The upgrade procedures include the following:

7.1 Memory Upgrade

Your notebook computer offers 200-pin SODIMM (Small Outline Dual Inline Memory Module) at least 256MB DDR-SDRAM. The memory compartment is located inside your computer. The table below lists the possible combinations of different memory module and memory size.

+ ***Please contact dealer for changing or adding DDR-SDRAM module. It is not available for users to change it by themselves.***

Based Memory	Installing Memory	Total
256 MB	0 MB	**256 MB**
256 MB	256 MB	**512 MB**
256 MB	512 MB	**768 MB**
256 MB	1024 MB	**1280 MB**
512 MB	0 MB	**512 MB**
512 MB	256 MB	**768 MB**
512 MB	512 MB	**1024 MB**
512 MB	1024MB	**1536 MB**
1024MB	0 MB	**1024 MB**
1024MB	256 MB	**1280 MB**
1024MB	512 MB	**1536 MB**
1024MB	1024MB	**2048 MB**

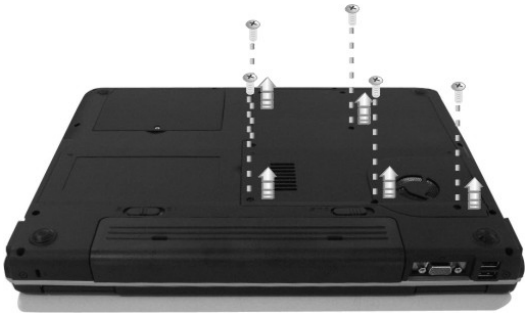
INSTALLING MEMORY MODULE

Your computer comes with standard 256 MB, 512MB or 1024MB of synchronous DDR SDRAM. You can increase system memory to a maximum of 2048 MB in the system, by installing two small outline double inline memory modules (SO-DIMMs) with installed base memory in the system.

The 256MB, 512MB and 1024MB memory modules are available:

To install the memory module:

1. Make sure the system is powered off, the battery also is removed and that no peripheral devices are attached.
2. Turn the computer upside-down and locate the screw that secures the DIMM door at the underside of the notebook.



3. Remove the screws and open the DIMM cover by your finger.
4. Locate the memory module into the empty memory module sockets. (Your system comes with one memory module already installed in the socket.)

+ ***Avoid touching the exposed components inside the system. Doing so may damage the system.***

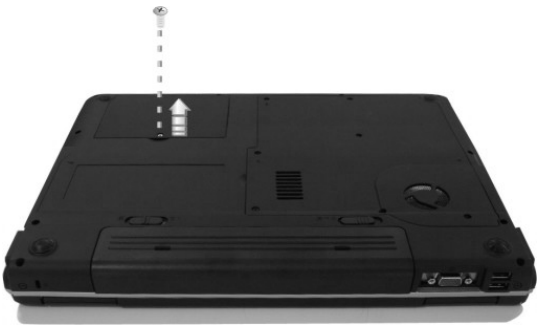
5. Insert the connector of the memory module into the socket. Make sure the notch of the memory module fits the nose of the socket.
   - Hold the memory module at a 30-degree angle and push its connector into the memory socket of the notebook.
   - Press down on the edge of the memory module until the locking tabs on both sides is locked.
6. Put the DIMM door back and secure the screw on the DIMM door.
7. Turn the system over.

To remove a memory module, push the locking tabs aside from the memory module until the module pops up. Then, remove the memory module.

7.2 Hard Disk Upgrade

Your notebook computer offers one 2.5" format, 9.5mm height hard disk. If the volume does not fit your need or it is crashed, you can upgrade it by replacing with new hard disk. Please do the following steps to change it.

1. Remove the screw and open the cover by lifting its upper side cover.



2. Take out the hard disk from the compartment by finger carefully
3. Remove the connector from the hard disk gently.

4. Remove the crane screws located at each side of the hard disk.
5. Rotate and tighten the crane screws to the new hard disk.
6. Attach the connector to the new hard disk precisely.
7. Place the hard disk back to the compartment.
8. Cover the lid, then rotate and tighten the screws.
9. Set the boot device as DVD/CD-RW Combo drive and Primary Master as Auto on BIOS setup menu. Please refer to Chapter 6 about the setting of BIOS setup menu. Then, boot the system by using WinXP CD-ROM and the system will detect the hard disk automatically and prompt you how to format the new disk.

+ ***Please tighten the screws located at each side of the hard disk before operating the hard disk. Any vibration may cause damage for the running hard disk.***

+ ***Please contact dealer or certified technician for changing the hard disk drive. The damage of changing HDD resulting from users may not be under warranty***

7.3 Wireless Module Installation

This computer uses mini-PCI wireless LAN module at the bottom of this notebook for wireless connection.

+ ***Please contact dealer for adding or changing this module. Any damage that caused by inappropriately adding or changing this module will not be under warranty***

8 Caring for Your Notebook

Your Notebook PC is a fully IBM compatible portable personal computer with the latest features in mobile computing and multimedia technology. Lightweight and compact, your Notebook PC runs on a whole wide range of general business, personal productivity, and professional applications, it is ideal for use in the office, at home, and on the road.

Your Notebook PC also allows you for several levels of customization and expansion that are previously available only on desktop PCs.

8.1 Important Safety Instructions

Portable computers take the most beating from end users. This section gives you detailed information about how to maintain a safe working environment while using the notebook computer. You can maintain its condition and performance by following these guidelines. Please read it carefully to ensure maximum safety.

- Before cleaning the notebook computer, make sure it is disconnected from any external power supplies (i.e. AC adapter, car adapter and so on).
- When cleaning, do not use liquid or sprayed detergent for cleaning. Instead, use moisture sheet or a cloth for cleaning.
- The socket-outlet shall be installed near the notebook computer and shall be easily accessible.
- Please keep the notebook computer from humidity.
- Lay the notebook computer on a reliable surface when installing. A drop or fall may cause injury.
- The openings on the enclosure are for air convection hence the notebook computer can be protected from overheating. DO NOT COVER THE OPENINGS.
- Be careful of using power supply. The notebook computer has specific power requirements.
- Use only a power adapter approved for use with this notebook computer.
- The power adapter may have a 2-prong plug. This is an important safety feature. A compatible outlet is required. If it is not available, find a qualified electrician to install one.

- While unplugging the power cord, disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cords you may use can support the total current load of all the connected devices.
- Though your AC adapter is suitable for universal international voltage, it still requires a stable and continual power supply. Make sure the voltage of the power source when connect the notebook computer to the power outlet. If your are unsure of your local power specifications, consult your dealer or local power company.
- Place the power cord in such a way that people can not step on it. Do not place anything over the power cord.
- All cautions and warnings on the notebook computer should be noted.
- If the notebook computer is not in use for a long time, disconnect it from mains to avoid possible damage by transient over-voltage.
- Never pour any liquid into openings as this may cause fire or electrical shock.
- Never open the body of notebook computer. For safety reason, the notebook computer should only be opened by qualified service personnel.
- If one of the following situations arises, have the notebook computer checked by service personnel:
  - ⇓ The power cord or plug is damaged.
  - ⇓ Liquid has penetrated into the notebook computer.
  - ⇓ The notebook computer has been exposed to moisture.
  - ⇓ The notebook computer has not worked well or you can not get it work according to user's manual.

⇓ The notebook computer has dropped and damaged.

⇓ The notebook computer has obvious sign of breakage.

- Do not leave this notebook computer in an environment unconditioned. Storage temperature above 60ºC (140ºF) may damage the notebook computer.
- An approved power cord has to be used for the notebook computer's power supply. For a rated current up to 6A and an equipment weight more than 3 kg, a power cord not lighter than H05VV-F, 2G, 0.75mm^2, has to be used.
- To avoid any damage happened to the internal device, you should first disconnect the AC adapter and remove the battery pack from the notebook when replacing any internal device.

The sound pressure level at the operator's position according to IEC 60704-1 is equal or less than 70dB(A).

8.2 Cleaning Your Computer

When it is necessary to clean the plastic case and keyboard, use a soft, lint-free cloth, slightly dampened with a mild detergent solution or use the contents of any commercially available computer cleaning kit.

Never use alcohol, petroleum-based solvents, or harsh detergents to clean the notebook. Also never spray any liquids directly on the computer case, keyboard, or screen. If the liquid-crystal display (LCD) screen has become smeared or dusty, clean the screen by first applying a mild glass cleaner to a soft, clean, lint-free cloth, and gently wipe the glass. Never apply liquids directly on the screen surface. Moreover, do not use paper towels to clean the display screen. Paper can scratch the display screen matte.

8.3 Maintaining the LCD Quality

When it comes to screen problems, heat plays a big part. After a good working session, the typical routine is to shut the machine and close the cover. But the display surface - no matter what type it is - and the components inside the computer radiates heat; when you close the cover, you trap the heat against the screen. Leave the computer's cover open for about ten minutes while the heat disperses. Make this a habit.

You should also enable the power management of your computer to turn off the LCD power and display when the system is in inactivity for some time. Adding screen savers is also acceptable.

Follow the safety guidelines mentioned earlier and how to clean your computer.

8.4 Maintaining Your Hard Disk

Losing your data has the same consequences as a system break down. Users must make it a habit of doing hard disk maintenance every week or so. Here is some maintenance you could do:

- Always back up your data files from your hard disk.
- Install the virus detecting program to monitor virus that could tamper your files.
- Use SCANDISK once in a while to correct any errors found in the directory and File Allocation Table. This will also free up space from any unused sectors.
- Never move or raise the computer while the hard disk is being accessed, most especially don't jar the hard disk as this may cause a hard disk crash.

- Use hard disk maintenance programs like **Disk Defragmenter** of Windows. These reorganize your hard disk by eliminating fragmentation and improving your hard disk access time.
- Install a system password in your computer so others won't be able to use the hard disk.

8.5 Battery Care Guidelines

The battery pack furnished with the computer requires reasonable care and handling to ensure efficient operation and maximum life. There is a risk of fire and chemical burn if the battery pack is handled improperly.

To ensure that the battery pack endures normal life cycle, always observe the following precautions when handling the battery pack:

- Handle batteries carefully. Do not try to disassemble, crush, puncture, open, drop, mutilate, short external contacts, disposed of in water or fire, or expose it to temperatures higher than 60 C.
- Recharge batteries only as described in this manual and only in ventilated areas. Never use an external charger other than the one supplied with your computer.
- Do not leave batteries in hot locations for more than a day or two.
- Do not leave your battery in your computer for longer than 1 month without plugging in the power adapter.
- Do not leave battery in storage for more than 2 months without recharging it to prevent over discharge. Over discharge will hurt the battery
- Dispose dead battery properly to protect the environment. The batteries contain hazardous chemicals and should not be thrown out with household or office trash.

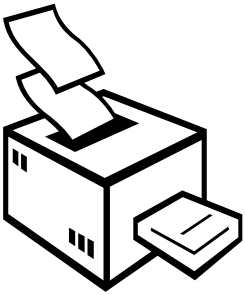
- You should always discharge your battery before recharging it on either of these two conditions: first, this is the first time you start to use your battery; second, you had not charge the battery for more than 2 months. To discharge the battery, please execute the "Battery Refresh" function in the BIOS Setup Utility.

8.6 When You Travel

For safety and convenience when traveling, please follow these instructions:

- Back up all needed files on your hard disk before traveling.
- Recharge your battery overnight to ensure full battery power before you leave.
- Don't forget to bring along the AC adapter and extra battery pack.
- Try to bring backup software as well.
- Check the voltage rating and the outlet type of your destination. If the power cord of the adapter is different, then you need to purchase a suitable one. Consult your dealer.
- Carry your computer in its carrying case or in a briefcase. Never check-in the computer as a luggage.
- Remember to apply those power saving features and techniques to save battery power.

APPENDIX A
System Specification



This appendix gives information on the technical and hardware specifications of your computer. Please note that the information mentioned here may not be exactly the same with your computer as specification is subject to change without notice or modifying this manual.

Designed with an advanced modular architecture, your Notebook PC also allows you for several levels of customization and expansion that are previously available only on desktop PCs.

PROCESSOR UNIT

- Intel® Celeron® M Processor Dothan
- Above 1.5 GHz CPU
- 1MB integrated L2 cache for the processor

SYSTEM MEMORY

- Two 200-pin memory slots
- User-upgradeable to maximum 2GB using 200-pin SODIMM 256MB, 512MB or 1024MB modules
- DDR –333/400 SDRAM modules

LCD DISPLAY

- 15.4" WXGA (16:10) Color TFT LCD, 1280x800
- Maximum 16M true colors on all LCD display

VGA SYSTEM

- Integrated ATI RC410MB graphic engine
- Simultaneous LCD and external monitor (CRT) display
- Maximum 16 million colors on LCD display at 1280x800 resolution for 15.4" LCD
- Maximum 16 million colors on external monitor or projector at 1280x1024 resolution (Non-Interlaced)

STORAGE

- 2.5" Format 9.5mm High PATA HDD Module; Bus Mastering, Ultra DMA ATA-133 Support for LBA Scheme
- Enhanced IDE bootable DVD/CD-RW Combo drive module
- Optional DVD Dual drive

AUDIO SYSTEM

- Full-duplex 16-bit stereo speaker with wavetable support
- H/W Audio Sound Blaster 16 compatible
- Built-in dual speakers
- Audio input jacks for microphone (MIC)
- Audio output jack for external speaker or headphone (Line-Out)
- Digitized audio SPDIF port for high quality signal transmission.
- Sound volume adjust by K/B Hot-Keys

GLIDE PAD

Integrated Glide Pad (Serial/USB mouse) pointing device with 2 click buttons

KEYBOARD

- Full-sized 87-keys keyboard with Windows systems hot-keys, inverted T-cursor keys, 6 hot keys, 12 function keys, and embedded numeric keypad
- Provides international language keyboard

FLASH BIOS

512K Flash ROM BIOS for easy BIOS upgrade

I/O PORTS

- 1 x 15-pin VGA port
- 1 x TV-Out Port (S-Video)
- 4 x Universal Serial Bus (USB 2.0)
- 1 x LAN port
- 1 x Modem port

WIRELESS DEVICES

IEEE 802.11b/g, Mini PCI 802.11b/g Wireless LAN Solution

AC/DC POWER SUPPLY ADAPTER

Universal auto-switching (100V~240V) 65W adapter, 20 Volt

BATTERY

- Rechargeable 6 Cells Li-ion battery pack with Smart Battery function
- Approximately 3 Hours (for Battery Mark) Battery Life

WEIGHT AND DIMENSION

- 357(W) x 271(D) x 24 ~ 39(H) mm
- Approximately 3.18 kg